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Titolo	Scientific ocean drilling [[electronic resource]] : accomplishments and challenges // Committee on the Review of the Scientific Accomplishments and Assessment of the Potential for Future Transformative Discoveries with U.S.-Supported Scientific Ocean Drilling, Ocean Studies Board, Division on Earth and Life Studies, National Research Council of The National Academies
Pubbl/distr/stampa	Washington, D.C., : National Academies Press, c2011
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Descrizione fisica	1 online resource (158 p.)
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction to U.S. scientific ocean drilling -- Scientific accomplishments : solid earth cycles -- Scientific accomplishments : fluids, flow, and life in the seafloor -- Scientific accomplishments : Earth's climate history -- Education, outreach, and capacity building -- Assessment of "Illuminating Earth's Past, Present, and Future: the International Ocean Discovery Program Science Plan for 2012-2023."
Sommario/riassunto	"Through direct exploration of the seafloor, U.S.-supported scientific ocean drilling programs have significantly contributed to a broad range of scientific accomplishments in Earth science disciplines, shaping understanding of Earth systems and enabling new fields of inquiry. Scientific Ocean Drilling: Accomplishments and Challenges reviews the scientific accomplishments of U.S.-supported scientific ocean drilling over the past four decades. The book evaluates how the programs (Deep Sea Drilling Project [DSDP], 1968-1983, Ocean Drilling

Program [ODP], 1984-2003, and Integrated Ocean Drilling Program [IODP], 2003-2013) have shaped understanding of Earth systems and Earth history and assessed the role of scientific ocean drilling in enabling new fields of inquiry. This book also assesses the potential for transformative discoveries for the next proposed phase of scientific ocean drilling, which is scheduled to run from 2013 to 2023. The programs' technological innovations have played a strong role in these accomplishments. The science plan for the proposed 2013-2023 program presents a strong case for the continuation of scientific ocean drilling. Each of the plan's four themes identifies compelling challenges with potential for transformative science that could only be addressed through scientific ocean drilling, although some challenges appear to have greater potential than others. Prioritizing science plan challenges and integrating multiple objectives into single expeditions would help use resources more effectively, while encouraging technological innovations would continue to increase the potential for groundbreaking science."--Publisher's description.
